

I Claim:

1. A method for allowing a GPS receiver and a cellular telephone transceiver to share a common antenna comprising the steps of:
  - coupling said GPS receiver and said cellular telephone transceiver to said antenna; and
  - disconnecting said GPS receiver from said antenna when said cellular telephone transceiver is transmitting.
2. The method of claim 1 wherein said disconnecting step comprises the steps of:
  - providing an signal indicating when said cellular telephone transceiver is transmitting;
  - providing an electronic switch controlled by said signal; and
  - using said switch, switching said GPS receiver from said antenna to ground.
3. The method of claim 1 wherein said antenna is a quadruple band antenna.
4. The method of claim 3 wherein said quadruple band antenna is tuned to the transmit and receive frequencies of said cellular telephone transceiver and the receive frequency of said GPS receiver.
5. The method of claim 1 further comprising the steps of:
  - causing said cellular telephone transceiver to provide a signal to said GPS receiver when said cellular telephone transceiver ceases transmitting; and
  - causing said GPS receiver to begin searching for satellite signals when said signal is received.
6. In a cellular telephone having a GPS receiver and a quadruple band antenna, an improvement comprising:
  - a switch, connecting said GPS receiver and said antenna;
  - wherein said switch disconnects said GPS receiver from said antenna when said cellular controlled by a signal from said cellular telephone is transmitting.

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7. The improvement of claim 6 further comprising:
  - a connection between said cellular telephone and said GPS receiver for transmitting information regarding the period of transmission of said cellular telephone to said GPS receiver; and
  - means, in said GPS receiver, for delaying the start of a satellite search until the end of said period of transmission of said cellular telephone.
8. A method for improving the performance of a cellular telephone equipped with a GPS receiver comprising the steps of:
  - providing a quadruple band antenna;
  - providing a diversity antenna for said GPS receiver;
  - providing a controllable switch capable of switching said GPS between said quadruple band antenna and said diversity antenna; and
  - switching said GPS receiver from said quadruple band antenna to said diversity antenna when said cellular telephone is transmitting.
9. The method of claim 8 wherein said switching step includes the steps of:
  - causing said cellular telephone to provide a signal to said GPS receiver when said cellular telephone transceiver ceases transmitting; and
  - causing said GPS receiver to delay searching for satellite signals until said signal is received.
10. The method of claim 8 further comprising the steps of:
  - monitoring the strength of GPS signals received on said quadruple band antenna and on said diversity antenna; and
  - switching said GPS receiver to the antenna with the stronger signal during the time said GPS receiver is receiving.
11. The method of claim 10 wherein said switching step comprises the steps of:
  - providing a first signal when said cellular telephone is transmitting;

providing a second signal when said GPS receiver receives a stronger signal from said diversity antenna; and  
logically ORing said first and said second signals to determine when said GPS receiver should be switched to said diversity antenna.

12. The method of claim 11 further comprising the steps of:

causing said cellular telephone to provide a signal to said GPS receiver when said cellular telephone transceiver ceases transmitting; and  
causing said GPS receiver to delay searching for satellite signals until said signal is received.

13. In a cellular telephone equipped with a GPS receiver and a quadruple band antenna, an improvement comprising:

a switch; and  
a diversity antenna, coupled to said GPS receiver through said switch;  
wherein said switch switches said GPS receiver from said quadruple band antenna to said diversity antenna when said cellular telephone is transmitting.

14. The improvement of claim 13 wherein said switch is controllable and further comprising:

circuitry for controlling said switch;  
wherein said circuitry is coupled to said cellular telephone and further wherein said circuitry receives a signal from said cellular telephone when said cellular telephone is transmitting;

15. The improvement of claim 14 wherein said GPS receiver is coupled to said cellular telephone and further comprising means, in said GPS receiver, for delaying the start of a satellite search until the end of said period of transmission of said cellular telephone.

16. The improvement of claim 15 further comprising:

circuitry, coupled to said GPS receiver, for comparing the strength of signals received from both said quadruple band antenna and said diversity antenna;

wherein said circuitry for controlling said switch causes said GPS receiver to switch from said quadruple band antenna to said diversity antenna when said cellular telephone is transmitting or when said signal strength from said diversity antenna is stronger than said signal strength from said quadruple band antenna.

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